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Terms	Documents
cpg same treat\$ same asthma	16

Database:

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US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

L4

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side by side**Query****Hit Count** **Set Name**
result set*DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=NO; OP=OR*

<u>L4</u>	cpg same treat\$ same asthma	16	<u>L4</u>
<u>L3</u>	dermatitis same cpg	0	<u>L3</u>
<u>L2</u>	dermitis same cpg	0	<u>L2</u>
<u>L1</u>	atopic same cpg	2	<u>L1</u>

END OF SEARCH HISTORY

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Derwent World Patents Index
IBM Technical Disclosure Bulletins

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<i>DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=NO; OP=OR</i>			
<u>L3</u>	dermatitis same cpg	0	<u>L3</u>
<u>L2</u>	dermitis same cpg	0	<u>L2</u>
<u>L1</u>	atopic same cpg	2	<u>L1</u>

END OF SEARCH HISTORY

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S2	22	RD (unique items)

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(c) 2003 CAB International
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(c) 2002 Internl Academy at Santa Barbara
File 103:Energy SciTec 1974-2003/Feb B2
(c) 2003 Contains copyrighted material
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(c) format only 2003 The Dialog Corporation
File 162:CAB Health 1983-2003/Jan
(c) 2003 CAB International
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(c) 2003 Royal Soc Chemistry
File 35:Dissertation Abs Online 1861-2003/Feb
(c) 2003 ProQuest Info&Learning
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File 91:MANTIS(TM) 1880-2002/Oct
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File 149:TGG Health&Wellness DB(SM) 1976-2003/Feb W3
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File 164:Allied & Complementary Medicine 1984-2003/Feb
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Set	Items	Description
S1	68	ATOPIC (S) CPG
S2	22	RD (unique items)

>>>KWIC option is not available in file(s): 399

2/3,K/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.

13819029 BIOSIS NO.: 200200447850

Treatment of established asthma in a murine model using CpG

oligodeoxynucleotides.

AUTHOR: Kline Joel N(a); Kitagaki Kunihiro; Businga Thomas R; Jain Vipul V
AUTHOR ADDRESS: (a)Univ. of Iowa Hospitals and Clinics, 200 Newton Rd.,
C33GH, Iowa City, IA, 52242**USA E-Mail: joel-kline@uiowa.edu
JOURNAL: American Journal of Physiology 283 (1 Part 1):pL170-L179 July,
2002
MEDIUM: print
ISSN: 0002-9513
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Allergen immunotherapy is an effective but underutilized treatment for *atopic* asthma. We have previously demonstrated that *CpG* oligodeoxynucleotides (*CpG* ODN) can prevent the development of a murine model of asthma. In the current study, we evaluated the role of *CpG* ODN in the treatment of established eosinophilic airway inflammation and bronchial hyperreactivity in a murine model of asthma. In this model, mice with established ovalbumin (OVA)-induced airway disease were given a course of immunotherapy (using low doses of OVA) in the presence or absence of *CpG* ODN. All mice then were rechallenged with experimental allergen. Untreated mice developed marked airway eosinophilia and bronchial hyperresponsiveness, which were significantly reduced by treatment with OVA and *CpG*. *CpG* ODN leads to induction of antigen-induced Th1 cytokine responses; successful therapy was associated with induction of the chemokines interferon-gamma-inducible protein-10 and RANTES and suppression of eotaxin. Unlike previous studies, these data demonstrate that the combination of *CpG* ODN and allergen can effectively reverse established *atopic* eosinophilic airway disease, at least partially through redirecting a Th2 to a Th1 response.

2/3,K/2 (Item 2 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)
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13361693 BIOSIS NO.: 200100568842

Atopic disorders: A vaccine around the corner?

AUTHOR: Wohlleben Gisela(a); Erb Klaus Joseph(a)
AUTHOR ADDRESS: (a)Centre for Infectious Diseases, University of Wuerzburg,
Roentgenring 11, 97070, Wuerzburg: klaus.erb@mail.uni-wuerzburg.de**
Germany
JOURNAL: Trends in Immunology 22 (11):p618-626 November, 2001
MEDIUM: print
ISSN: 1471-4906
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: The incidence and severity of *atopic* disorders, in particular asthma, is steadily increasing at an alarming rate. Furthermore, no primary prevention measure exists to date. However, recent results obtained from numerous...

...of systemic or local allergen-dependent or -independent T helper 1 (Th1) immune responses, through the use of killed bacteria (or components derived from them), *CpG* oligodeoxynucleotides or plasmid DNA, and the induction of allergen-specific T-cell tolerance. Here, we review the data showing that animals can be protected from...

2/3,K/3 (Item 3 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)
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12363154 BIOSIS NO.: 200000116656

Genetic and environmental factors contributing to the onset of allergic disorders.

AUTHOR: Parronchi P; Brugnolo F; Sampognaro S; Maggi E(a)

AUTHOR ADDRESS: (a)Dipartimento di Medicina Interna, Sezione di
Immunoallergologia e Malattie Respiratorie, Policlinico di Careggi,
I-50134, Firenze**Italy

JOURNAL: International Archives of Allergy and Immunology 121 (1):p2-9
Jan., 2000

ISSN: 1018-2438

DOCUMENT TYPE: Literature Review

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

...ABSTRACT: naive Th cells when they encounter the specific antigen in an IL-4-containing microenvironment. The question of how these Th2 cells are selected in *atopic* patients is also unclear. Both the nature of the T cell receptor signalling provided by the allergen peptide ligand and a dysregulation of IL-4...

...controlling IL-4 expression and/or abnormalities of regulatory mechanisms of Th2 development and/or function may be responsible for Th2 responses against allergens in *atopic* people. The increasing prevalence of allergy in developed countries suggests that environmental factors acting either before or after birth also contribute to regulate the development...

...certainly important in influencing the individual outcome in the Th response to ubiquitous allergens. Moreover, the recent evidence that bacterial DNA or oligodeoxynucleotides containing unmethylated '*CpG* motifs' promote the development of Th1 cells via the production of immunomodulatory cytokines (namely IL-12, IL-18 and IFNs) by professional antigen-presenting cells confirms previous epidemiological data. The new insight into the pathophysiology of T cell responses in *atopic* diseases provides exciting opportunities for the development of novel immunotherapeutic strategies.

2/3,K/4 (Item 4 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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12060624 BIOSIS NO.: 199900355473

Oligodeoxynucleotides containing CpG motifs induce IL-12, IL-18 and IFN-gamma production in cells from allergic individuals and inhibit IgE synthesis in vitro.

AUTHOR: Bohle Barbara; Jahn-Schmid Beatrice; Maurer Dieter; Kraft Dietrich; Ebner Christof(a)

AUTHOR ADDRESS: (a)Department of General and Experimental Pathology,
University of Vienna, Waehringer Guertel 18-20**Austria

JOURNAL: European Journal of Immunology 29 (7):p2344-2353 July, 1999

ISSN: 0014-2980

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ABSTRACT: The effects of phosphorothioate oligonucleotides containing *CpG* motifs (*CpG*-ODN) on cultured cells from allergic patients and non-*atopic* individuals were investigated. In peripheral blood mononuclear cells (PBMC) *CpG*-ODN led to a significant increase of IFN-gamma. By intracellular cytokine staining, IFN-gamma production could be attributed to NK cells and inhibition experiments indicated an IL-12-dependent mechanism. Moreover, *CpG*-ODN increased mRNA expression of IL-12 and IL-18 in PBMC. In this respect, no significant difference between allergic and non-*atopic* individuals was observed. Monocyte-derived dendritic cells were identified as one IL-12- and IL-18-producing source. In addition, stimulation of PBMC derived from *atopic* patients with

CpG-ODN led to a considerable increase of polyclonal IgG and IgM synthesis. In contrast, the production of total IgE was suppressed. *CpG*-ODN induced a significant rise of IgG and IgM specific for allergens to which the patients were sensitized, whereas allergen-specific IgE levels remained unchanged. Our data suggest that *CpG*-ODN display a strong influence on the ongoing immune response and might represent potential adjuvants for specific immunotherapy of type I allergy.

2/3,K/5 (Item 1 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2003 Inst for Sci Info. All rts. reserv.

11187423 Genuine Article#: 618GW No. References: 48

Title: Plasmacytoid dendritic cells: A new cutaneous dendritic cell subset with distinct role in inflammatory skin diseases

Author(s): Wollenberg A (REPRINT) ; Wagner M; Gunther S; Towarowski A; Tuma E; Moderer M; Rothenfusser S; Wetzel S; Endres S; Hartmann G

Corporate Source: Univ Munich,Dept Dermatol,Frauenlobstr 9-11/D-80337 Munich//Germany/ (REPRINT); Univ Munich,Dept Dermatol & Allergy,Munich//Germany//; Univ Munich,Dept Internal Med, Div Clin Pharmacol,Munich//Germany//; Univ Munich,Dept Ear Nose & Throat,Munich//Germany/

Journal: JOURNAL OF INVESTIGATIVE DERMATOLOGY, 2002, V119, N5 (NOV), P 1096-1102

ISSN: 0022-202X Publication date: 20021100

Publisher: BLACKWELL PUBLISHING INC, 350 MAIN ST, MALDEN, MA 02148 USA

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

...Abstract: dendritic epidermal cells and plasmacytoid dendritic cells. In contrast, many inflammatory dendritic epidermal cells but only very few plasmacytoid dendritic cells could be detected in *atopic* dermatitis lesions. Lupus erythematosus was characterized by high numbers of plasmacytoid dendritic cells but low numbers of inflammatory dendritic epidermal cells. These results demonstrate that...

...inflammatory dendritic epidermal cells are selectively recruited to the skin lesions depending on the type of skin disease. The lack of plasmacytoid dendritic cells in *atopic* dermatitis may predispose *atopic* dermatitis patients to viral infections such as eczema herpeticum, a secondary infection of *atopic* dermatitis lesions with herpes simplex virus. The composition of dendritic cell subsets may help to clarify the etiology of inflammatory skin diseases and forms the basis for therapeutic intervention with selective microbial molecules such as immunostimulatory *CpG* oligonucleotides.

...Identifiers--*ATOPIC*-DERMATITIS; *CPG* DNA; LUPUS-ERYTHEMATOSUS; LANGERHANS CELLS; INTERFERON; ALPHA/BETA; EXPRESSION; VIRUS; POLARIZATION; ANTIBODIES

2/3,K/6 (Item 2 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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10980083 Genuine Article#: 592KM No. References: 44

Title: Polyclonal and allergen-induced cytokine responses in adults with asthma: Resolution of asthma is associated with normalization of IFN-gamma responses

Author(s): Smart JM; Horak E; Kemp AS; Robertson CF; Tang MLK (REPRINT)

Corporate Source: Royal Childrens Hosp,Murdoch Childrens Res Inst, Dept Immunol,Flemington Rd/Parkville/Vic 3052/Australia/ (REPRINT); Royal Childrens Hosp,Murdoch Childrens Res Inst, Dept Immunol,Parkville/Vic 3052/Australia//; Royal Childrens Hosp,Murdoch Childrens Res Inst, Dept Resp Med,Parkville/Vic 3052/Australia/

Journal: JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY, 2002, V110, N3 (SEP), P450-456

ISSN: 0091-6749 Publication date: 20020900

Publisher: MOSBY, INC, 11830 WESTLINE INDUSTRIAL DR, ST LOUIS, MO

63146-3318 USA

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

...Identifiers--BLOOD MONONUCLEAR-CELLS; REDUCED INTERFERON-GAMMA;
NATURAL-HISTORY; GENE-EXPRESSION; *CPG* OLIGODEOXYNUCLEOTIDES; *ATOPIC*
-DERMATITIS; CHILDHOOD ASTHMA; MESSENGER-RNA; CHILDREN; INTERLEUKIN-4

2/3,K/7 (Item 3 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2003 Inst for Sci Info. All rts. reserv.

10957403 Genuine Article#: 588XK No. References: 80

Title: Allergen-specific T lymphocytes as targets for specific immunotherapy: Striking at the roots of type I allergy

Author(s): Bohle B (REPRINT)

Corporate Source: Univ Vienna, Div Immunopathol, Dept

Pathophysiol, Waehringer Guertel 18-20/A-1090 Vienna//Austria/ (REPRINT)

; Univ Vienna, Div Immunopathol, Dept Pathophysiol, A-1090

Vienna//Austria/

Journal: ARCHIVUM IMMUNOLOGIAE ET THERAPIAE EXPERIMENTALIS, 2002, V50, N4
, P233-241

ISSN: 0004-069X Publication date: 20020000

Publisher: INST IMMUNOLOGY & EXPERIMENTAL THERAPY, POLISH ACADEMY OF
SCIENCES CZERSKA 12, 53-114 WROCLAW, POLAND

Language: English Document Type: REVIEW (ABSTRACT AVAILABLE)

...Abstract: at the level of T helper (Th) lymphocytes. It was found that
allergen-specific CD4(+) Th2 lymphocytes play a key role in the
pathophysiology of *atopic* diseases. During successful SIT; the
Th1-dominated immune response is modified towards a Th1 response,
leading to a decline in allergen-specific IgE levels in...

...to improve SIT: (1) the use of hypoallergenic proteins characterized by
reduced IgE-binding capacities but retained T lymphocyte-activating
properties and (2) oligodeoxynucleotides containing *CpG* motifs as an
example of adjuvants which foster Th1 immune responses. Both approaches
promise to be capable of adjusting the pathological Th2 immune
response.

2/3,K/8 (Item 4 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2003 Inst for Sci Info. All rts. reserv.

10258721 Genuine Article#: 503CZ No. References: 91

Title: How to deal with polarized Th2 cells: Exploring the Achilles' heel

Author(s): Smits HH; Hilkens CMU; Kalinski P; Kapsenberg ML; Wierenga EA
(REPRINT)

Corporate Source: Univ Amsterdam, Acad Med Ctr, Dept Cell Biol &

Histol, Meibergdreef 15/NL-1105 AZ Amsterdam//Netherlands/ (REPRINT);

Univ Amsterdam, Acad Med Ctr, Dept Cell Biol & Histol, NL-1105 AZ

Amsterdam//Netherlands/; Imperial Canc Res Fund, London WC2A

3PX//England/; Univ Pittsburgh, Dept Surg, Pittsburgh//PA/

Journal: INTERNATIONAL ARCHIVES OF ALLERGY AND IMMUNOLOGY, 2001, V126, N2 (OCT), P102-110

ISSN: 1018-2438 Publication date: 20011000

Publisher: KARGER, ALLSCHWILERSTRASSE 10, CH-4009 BASEL, SWITZERLAND

Language: English Document Type: REVIEW (ABSTRACT AVAILABLE)

...Identifiers--HUMAN DENDRITIC CELLS; CD4(+) T-CELLS; INDUCED AIRWAY
HYPERRESPONSIVENESS; BETA-2 CHAIN EXPRESSION; IL-12 RECEPTOR BETA-1;
ATOPIC-DERMATITIS; *CPG* OLIGODEOXYNUCLEOTIDES; PROSTAGLANDIN E-2;
IN-VITRO; SELECTIVE EXPRESSION

2/3,K/9 (Item 5 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2003 Inst for Sci Info. All rts. reserv.

09526106 Genuine Article#: 409AG No. References: 63

Title: The Th1/Th2 paradigm in allergic asthma

Author(s): Hanse G (REPRINT)

Corporate Source: Univ Halle Wittenberg, Klin & Poliklin Kinder & Jugendmed,
Labor Immunol & Transplantationsbiol, D-06097 Halle//Germany/ (REPRINT);
Univ Halle Wittenberg, Klin & Poliklin Kinder & Jugendmed, Labor Immunol
& Transplantationsbiol, D-06097 Halle//Germany/

Journal: MONATSSCHRIFT KINDERHEILKUNDE, 2001, V149, N2 (FEB), P112-119

ISSN: 0026-9298 Publication date: 20010200

Publisher: SPRINGER-VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010 USA

Language: German Document Type: ARTICLE (ABSTRACT AVAILABLE)

...Identifiers--INDUCED AIRWAY HYPERREACTIVITY; T-CELL RESPONSES; *ATOPIC*
ASTHMA; MOUSE MODEL; TH2 CELLS; *CPG* OLIGODEOXYNUCLEOTIDES; DECREASED
PREVALENCE; NORMAL-CHILDREN; MESSENGER-RNA; CUTTING EDGE

2/3,K/10 (Item 6 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2003 Inst for Sci Info. All rts. reserv.

09481222 Genuine Article#: 410JW No. References: 35

**Title: Oligodeoxynucleotides containing CpG motifs induce low levels of
TNF-alpha in human B lymphocytes: Possible adjuvants for Th1 responses**

Author(s): Bohle B (REPRINT) ; Orel L; Kraft D; Ebner C

Corporate Source: Univ Vienna, Dept Pathophysiol, Div
Immunopathol, Waehringer Guertel 18-20/A-1090 Vienna//Austria/ (REPRINT)
; Univ Vienna, Dept Pathophysiol, Div Immunopathol, A-1090
Vienna//Austria/

Journal: JOURNAL OF IMMUNOLOGY, 2001, V166, N6 (MAR 15), P3743-3748

ISSN: 0022-1767 Publication date: 20010315

Publisher: AMER ASSOC IMMUNOLOGISTS, 9650 ROCKVILLE PIKE, BETHESDA, MD
20814 USA

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

Abstract: Oligodeoxynucleotides containing *CpG* motifs (*CpG*-ODN)
represent potential adjuvants for specific immunotherapy of type I
allergies because they foster Th1-like immune responses. However,
previous work has shown that *CpG*-ODN induce systemically active
levels of TNF-alpha in murine macrophages. The goal of the present
study was to evaluate the release of TNF-alpha in human cells by a
CpG-ODN proven to induce Th1 immune responses in cells from *atopic*
individuals and in mice. *CpG*-ODN induced TNF-alpha in cells from
atopic and healthy individuals. However, the amounts were low, as
determined by comparison with commonly used Ags, Intracellular cytokine
staining of PBMC revealed that *CpG*-ODN-induced TNF-alpha derived
exclusively from B lymphocytes. TNF-cu contributed to the *CpG*
-ODN-augmented proliferation and Tg synthesis in PBMC, but was not
involved in IFN-gamma synthesis. In conclusion, our findings indicate
that certain *CpG*-ODN induce low amounts of TNF-alpha in human B
lymphocytes and may therefore be used to modulate Th2-biased immune
responses in allergic patients.

2/3,K/11 (Item 7 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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09429457 Genuine Article#: 403GJ No. References: 58

Title: New trends in immunotherapy to prevent atopic diseases

Author(s): Walker C (REPRINT) ; Zuany-Amorim C

Corporate Source: Novartis Pharmaceut Ltd, Novartis Horsham Res
Ctr, Wimbleshurst Rd/Horsham RH12 5AB/W Sussex/England/ (REPRINT);
Novartis Pharmaceut Ltd, Novartis Horsham Res Ctr, Horsham RH12 5AB/W

Sussex/England/

Journal: TRENDS IN PHARMACOLOGICAL SCIENCES, 2001, V22, N2 (FEB), P84-90

ISSN: 0165-6147 Publication date: 20010200

Publisher: ELSEVIER SCIENCE LONDON, 84 THEOBALDS RD, LONDON WC1X 8RR,
ENGLAND

Language: English Document Type: REVIEW (ABSTRACT AVAILABLE)

...Abstract: capacity to produce a long-term, antigen-specific, protective immune response, is the only aetiologic treatment that offers the possibility of preventing or even curing *atopic* diseases. However, the potential severe side-effects associated with conventional immunotherapy using whole allergen extract limits its widespread use. Thus, novel strategies to minimize the side-effects and improve the efficacy of immunotherapy are of considerable interest in the treatment of *atopic* diseases. Promising animal and human studies, using approaches such as peptide immunotherapy, DNA vaccination, *CpG* oligonucleotides and mycobacterial vaccines, suggest that it might be possible to prevent or cure *atopic* diseases in the future.

2/3,K/12 (Item 8 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2003 Inst for Sci Info. All rts. reserv.

08213559 Genuine Article#: 258MT No. References: 41

Title: Phosphorothioate oligodeoxynucleotides promote the in vitro development of human allergen-specific CD4(+) T cells into Th1 effectors

Author(s): Parronchi P; Brugnolo F; Annunziato F; Manuelli C; Sampognaro S; Mavilia C; Romagnani S (REPRINT) ; Maggi E

Corporate Source: POLICLIN CAREGGI, DIPARTIMENTO MED INTERNA, SEZ
IMMUNOALLERGOL, VIALE MORGAGNI 85/I-50134 FLORENCE//ITALY/ (REPRINT);
UNIV FLORENCE, DEPT INTERNAL MED/FLORENCE//ITALY/; UNIV
FLORENCE, IMMUNOALLERGOL & RESP DIS UNIT/FLORENCE//ITALY/

Journal: JOURNAL OF IMMUNOLOGY, 1999, V163, N11 (DEC 1), P5946-5953

ISSN: 0022-1767 Publication date: 19991201

Publisher: AMER ASSOC IMMUNOLOGISTS, 9650 ROCKVILLE PIKE, BETHESDA, MD
20814

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

...Abstract: the switch of murine immune responses from a Th2 to a Th1 profile of cytokine production that has been related to the activity of unmethylated *CPG* motifs present in bacterial, but not mammalian, DNA. We report here that some synthetic phosphorothioate, but not phosphodiester, oligodeoxynucleotides (ODNs) were able to induce B cell proliferation and to shift the in vitro differentiation of Dermatophagoides pteronyssinus group 1-specific human CD4(+) T cells from *atopic* donors into Th1 cell effectors showing a prevalent Th1, instead of Th2, cytokine profile. This latter effect was completely blocked by the neutralization of IL...

...their ability to stimulate the production of these cytokines by monocytes, dendritic, and MC cells. Cytosine methylation abolished the Th1-inducing activity of ODNs; however, *CpG* dinucleotide-containing ODNs exhibited the Th1-shifting effect independently of the presence or the absence of *CpG* motifs (5'-pur-pur-*CpG*-pyr-pyr-3'). Moreover, the inversion of *CpG* to GpC resulted only in a partial reduction of this activity, suggesting that the motif responsible for the Th1-skewing effect in humans is at...

2/3,K/13 (Item 9 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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07029079 Genuine Article#: 116KL No. References: 60

Title: Specific inhibition of interleukin-10 production in murine

macrophage-like cells by phosphorothioate antisense oligonucleotides

Author(s): Arima H; Takahashi M; Aramaki Y; Sakamoto T; Tsuchiya S
(REPRINT)

Corporate Source: TOKYO UNIV PHARM & LIFE SCI, SCH PHARM, 1432-1
HORINOUCI/HACHIOJI/TOKYO 19203/JAPAN/ (REPRINT); TOKYO UNIV PHARM &
LIFE SCI, SCH PHARM/HACHIOJI/TOKYO 19203/JAPAN/

Journal: ANTISENSE & NUCLEIC ACID DRUG DEVELOPMENT, 1998, V8, N4 (AUG), P
319-327

ISSN: 1087-2906 Publication date: 19980800

Publisher: MARY ANN LIEBERT INC PUBL, 2 MADISON AVENUE, LARCHMONT, NY 10538

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

...Identifiers--TUMOR-NECROSIS-FACTOR; T-HELPER CELL; *ATOPIC*-DERMATITIS;
BACTERIAL-DNA; LIPOPOLYSACCHARIDE LPS; FACTOR-ALPHA; *CPG* MOTIFS;
TYROSINE PHOSPHORYLATION; CYTOKINE SYNTHESIS; B-CELLS

2/3,K/14 (Item 1 from file: 71)

DIALOG(R)File 71:ELSEVIER BIOBASE

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01550634 1999266367

**Phosphorothioate oligodeoxynucleotides promote the in vitro development of
human allergen-specific CD4sup + T cells into Th1 effectors**

Parronchi P.; Brugnolo F.; Annunziato F.; Manuelli C.; Sampognaro S.;
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Journal: Journal of Immunology, 163/11 (5946-5953), 1999, United States

PUBLICATION DATE: December 1, 1999

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LANGUAGES: English SUMMARY LANGUAGES: English

NO. OF REFERENCES: 41

...the switch of murine immune responses from a Th2 to a Th1 profile of
cytokine production that has been related to the activity of unmethylated
CpG motifs present in bacterial, but not mammalian, DNA. We report here
that some synthetic phosphorothioate, but not phosphodiester,
oligodeoxynucleotides (ODNs) were able to induce B cell proliferation and
to shift the in vitro differentiation of Dermatophagoides pteronyssinus
group 1-specific human CD4sup + T cells from *atopic* donors into Th cell
effectors showing a prevalent Th1, instead of Th2, cytokine profile. This
latter effect was completely blocked by the neutralization of IL...

...their ability to stimulate the production of these cytokines by
monocytes, dendritic, and NK cells. Cytosine methylation abolished the
Th1-inducing activity of ODNs; however, *CpG* dinucleotide-containing ODNs
exhibited the Th1-shifting effect independently of the presence or the
absence of *CpG* motifs (5'-pur-pur-*CpG*-pyr-pyr-3'). Moreover, the
inversion of *CpG* to GpC resulted only in a partial reduction of this
activity, suggesting that the motif responsible for the Th1-skewing effect
in humans is at...

2/3,K/15 (Item 2 from file: 71)

DIALOG(R)File 71:ELSEVIER BIOBASE

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01185563 1999154358

**Oligodeoxynucleotides containing CpG motifs induce IL-12, IL-18 and
IFN-gamma production in cells from allergic individuals and inhibit IgE
synthesis in vitro**

Bohle A.; Jahn-Schmid B.; Maurer D.; Kraft D.; Ebner C.

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Journal: European Journal of Immunology, 29/7 (2344-2353), 1999, Germany
CODEN: EJIMA
ISSN: 0014-2980
DOCUMENT TYPE: Article
LANGUAGES: English SUMMARY LANGUAGES: English
NO. OF REFERENCES: 56

The effects of phosphorothioate oligonucleotides containing *CpG* motifs (*CpG*-ODN) on cultured cells from allergic patients and non-*atopic* individuals were investigated. In peripheral blood mononuclear cells (PBMC) *CpG*-ODN led to a significant increase of IFN-gamma. By intracellular cytokine staining, IFN-gamma production could be attributed to NK cells and inhibition experiments indicated an IL-12-dependent mechanism. Moreover, *CpG*-ODN increased mRNA expression of IL-12 and IL-18 in PBMC. In this respect, no significant difference between allergic and non-*atopic* individuals was observed. Monocyte-derived dendritic cells were identified as one IL-12- and IL-18-producing source. In addition, stimulation of PBMC derived from *atopic* patients with *CpG*-ODN led to a considerable increase of polyclonal IgG and IgM synthesis. In contrast, the production of total IgE was suppressed. *CpG*-ODN induced a significant rise of IgG and IgM specific for allergens to which the patients were sensitized, whereas allergen-specific IgE levels remained unchanged. Our data suggest that *CpG*-ODN display a strong influence on the ongoing immune response and might represent potential adjuvants for specific immunotherapy of type I allergy.

2/3,K/16 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE
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11731087 EMBASE No: 2002301557

Pandemic of atopic disease - A lack of microbial exposure in early infancy?

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Current Drug Targets - Infectious Disorders (CURR. DRUG TARGETS INFECT.
DISORD.) (Netherlands) 2002, 2/3 (193-199)

CODEN: CDTIA ISSN: 1568-0053

DOCUMENT TYPE: Journal ; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 77

...conditions in Western societies have reduced early microbial exposure, which has been proposed as a reason for the continuously rising prevalence of atopy and subsequent *atopic* diseases: *atopic* eczema, allergic rhinitis and asthma (The Hygiene Hypothesis of Allergy). This hypothesis is supported by immunological data showing that the immune response to microbial antigens...

...of cytokines that counterbalance the T-helper 2-polarized cytokine production of neonates, the continuity of which might lead to enhanced IgE production, atopy, and *atopic* disease. Experimental, epidemiological and clinical studies, conducted over the last decade, indicate that non-pathogenic microbes in the gut might be a major factor essential...

...randomised, placebo-controlled trial demonstrated that perinatal administration of probiotics, cultures of potentially beneficial bacteria of the healthy gut microflora, halved the later development of *atopic* eczema during the first two years of life. Some putative mechanisms of action of gut commensals in host-microbe interactions have been described. Two structural components of bacteria, the lipopolysaccharide portion of Gram-negative bacteria and specified *CpG* motif in bacterial DNA, activate

immunomodulatory genes via Toll-like receptors present e.g. on intestinal epithelial cells thus controlling physiological cytokine milieu in the...

2/3,K/17 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE
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11566015 EMBASE No: 2002137447
Topical immunomodulation in dermatology
TOPISCHE IMMUNOMODULATION IN DER DERMATOLOGIE
Hengge U.R.
Dr. U.R. Hengge, Klin. und Poliklin. für Dermatol., Venerol./Allergol.
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AUTHOR EMAIL: ulrich.hengge@uni-essen.de
H+G Zeitschrift für Hautkrankheiten (H G Z. HAUTKR.) (Germany) 2002,
77/3 (116-130)
CODEN: ZHKRA ISSN: 0301-0481
DOCUMENT TYPE: Journal ; Review
LANGUAGE: GERMAN SUMMARY LANGUAGE: ENGLISH; GERMAN
NUMBER OF REFERENCES: 133

...presentation by dendritic cells, they also act on B-cells leading to the synthesis of antibodies such as IgG₂a much like the recently discovered immunostimulatory *CpG* sequences that stimulate innate immunity. These sequences act as "danger signals" as they occur in bacterial and viral DNA but are selectively methylated and inactivated...

...the response. On the other hand, the topical immunosuppressive tacrolimus has been used with great success in the treatment of chronic inflammatory diseases such as *atopic* dermatitis in children and adults. Topical immunotherapy with both immunostimulatory and immunosuppressive agents bears potential for effective and patient-friendly treatment of inflammatory, infectious and...

2/3,K/18 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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14473277 22482602 PMID: 12594246
Cutting Edge: Histamine Inhibits IFN-alpha Release from Plasmacytoid Dendritic Cells.
Mazzoni Alessandra; Leifer Cynthia A; Mullen Gregory E D; Kennedy Margaret N; Klinman Dennis M; Segal David M
Experimental Immunology Branch, National Cancer Institute, Bethesda, MD 20892. Section of Retroviral Immunology, Center for Biologics Evaluation and Research, Food and Drug Administration, Bethesda, MD 20892.
Journal of immunology (Baltimore, Md. - 1950) (United States) Mar 1 2003, 170 (5) p2269-73, ISSN 0022-1767 Journal Code: 2985117R
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: In Process

... in a change from Th1 to Th2 in their T cell polarizing function. In this study, we show that human plasmacytoid DC, activated by either *CpG* oligodeoxynucleotides or viral infection, also respond to histamine through H2 receptors, leading to a marked down-regulation of IFN-alpha and TNF-alpha and a moderate switch in their capacity to polarize naive T cells. Our findings provide an explanation for low levels of type I IFN frequently observed in *atopic* individuals.

2/3,K/19 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

13027425 21462039 PMID: 11577559

DNA immunomodulation of asthma.

Kline Joel N; Ballas Zuhair K

University of Iowa College of Medicine, Iowa City, Iowa, USA.

Clinical allergy and immunology (United States) 2002, 16 p551-64,

ISSN 1075-7910 Journal Code: 9431211

Document type: Journal Article; Review; Review, Tutorial

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

... albeit by effects are still not fully understood. The approaches summarized in this chapter, alone or in combination, may yet allow one to reverse the *atopic* state. Meanwhile, other innovative DNA-based approaches are being developed, including the use of allergen DNA with or without *CpG*. Because most of the Th2 cytokines are on chromosome 5, the completion of the human genome project may open whole new venues of research aimed...

2/3,K/20 (Item 1 from file: 266)

DIALOG(R)File 266:FEDRIP

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00299668

IDENTIFYING NO.: 5R01AI45513-03 AGENCY CODE: CRISP

RSV AND ASTHMA

PRINCIPAL INVESTIGATOR: BROIDE, DAVID H

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PERFORMING ORG.: UNIVERSITY OF CALIFORNIA SAN DIEGO, SAN DIEGO, CALIFORNIA

SPONSORING ORG.: NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

FY : 2001

...SUMMARY: asthma. The overall objective of this grant proposal is therefore to understand the mechanism by which Respiratory Syncytial Virus (RSV) induces eosinophilic airway inflammation in *atopic* mice and to subsequently test the hypothesis that DNA immunization can inhibit RSV induced airway inflammation. In the first series of experiments we will demonstrate that viral infections such as RSV which are a frequent precipitant of childhood asthma induce eosinophilic inflammation in *atopic* mice by inducing the expression of IL-5 by CD8 + T cells and C chemokines by airway epithelium. The importance of the expression of these CC chemokines to eosinophil recruitment will be assessed in vivo in a mouse model of RSV infection of *atopic* mice pretreated with Ab to CC chemokines. To explore the possibility that a deficiency in functional *CpG* sequences in RSV promotes Th2 responses, we will infect mice with either RSV (? *CpG* suppressed), RSV and *CpG*, or Adenovirus (not *CpG* suppressed) to assess Th1 versus Th2 responses, eosinophilic airway inflammation and bronchial hyperreactivity. Additional experiments will determine which DNA based vaccine strategy (ISS alone, DNA-RSV-F alone, or the sequential combination) is the most effective in inhibiting eosinophilic inflammation, airway hyperreactivity and viral load in *atopic* mice challenged with RSV. To explore the mechanism of action of ISS in vivo, we will either use neutralizing Abs to individual cytokines (IL-12...

2/3,K/21 (Item 1 from file: 399)

DIALOG(R)File 399:CA SEARCH(R)

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137199811 CA: 137(14)199811r JOURNAL

Allergy immunotherapy and inhibition of Th2 immune responses: a sufficient strategy?

AUTHOR(S): Lewis, David B.

LOCATION: Department of Pediatrics, Division of Immunology and Transplantation Biology, Stanford University School of Medicine, Stanford, CA, 94305-5164, USA

JOURNAL: Curr. Opin. Immunol. (Current Opinion in Immunology) DATE: 2002

VOLUME: 14 NUMBER: 5 PAGES: 644-651 CODEN: COPIEL ISSN: 0952-7915

PUBLISHER ITEM IDENTIFIER: 0952-7915(02)00388-6 LANGUAGE: English

PUBLISHER: Elsevier Science Ltd.

2/3,K/22 (Item 1 from file: 444)

DIALOG(R)File 444:New England Journal of Med.

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**Advances in Immunology: Allergy and Allergic Diseases (First of Two Parts)
(Review Articles)**

Kay, A.B.

The New England Journal of Medicine

Jan 4, 2001; 344 (1),pp 30-37

LINE COUNT: 00371

WORD COUNT: 05125

TEXT

...s immune system shifts in favor of a Th1-mediated response to inhaled allergens (a process termed ``immune deviation''), (Ref. 12) whereas in the potentially *atopic* infant there is a further increase in Th2 cells that were primed in utero. Microbes are probably the chief stimuli of protective Th1-mediated immunity...

...cells and the amount of allergen to which the immune system is exposed (antigen). (Ref. 13,14) In addition, the presence of cytidine-phosphate-guanosine (*CpG*) repeats derived from bacteria favors the Th1 phenotype, whereas the presence of transcription factors such as GATA-3 favors the Th2 phenotype, (Ref. 15) as...